

Full Length Research Paper

Economic contributions of the forest to the economy of Edo State, Nigeria

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Evidence from the results of this current study showed that there are significant contributions from the forest to the economy of Edo State. A total of 217 mills using wood as raw materials are established in the state. The study showed that the revenue that accrued to government from 1991 - 2002 is reasonable. Apart from about 10,000 workers employed by the wood working mills the government has a number of other workers in its payroll. The control staffs are not enough and this resulted in illegal activities with negative impact on the environment. Other forest products which enhance the income of the local people are numerous. Edible fruits gathering for sale is mostly by women. The most preferred fruits are the fruits of *chrysophyllum albidum* and most frequent timber species is *Terminalia ivorensis*. It was noted that the communities were not satisfied with the government's activities as it holds the forest in trust for the communities. To avoid the clamour for resource control with its attendant problems of violence, destruction of lives and properties like what is happening in Niger Delta, inclusion of local communities in forest management and conservation efforts is recommended. Further more, to ensure survival of existing wood based industries, reasonable revenue to government, reduction of unemployment, economic empowerment of local women etc, increased funding of the forestry sub-sector to meet its obligations (Forest regeneration, conservation, protection etc) is suggested.

Key words: Economic, forest, communities, non timber produce, revenue.

INTRODUCTION

Generally the forest is defined as a tract of land dominated by trees. Forests are known to be crucial to the welfare of man and play a key role in climate and water cycles control. The people who live within the forest zones depend on them for survival in many ways. These include food, medicine, fuelwood, shelter, clothing, timber, construction materials etc. Apart from these contributions the forest if sustainably managed can enhance the economy of a state or region. Further more the forest clean the air, water, ameliorate the climate, check water and wind erosion (Azeke, 20003). Edo state, Nigeria has a population of 2.1 million people and land mass of 1,928,193 ha endowed with vast forest resources. International scientific interests were established in Edo state in terms of field laboratories and experimental research plots particularly in sapoba forest area. This emanated from the biodiversity and species richness of the forests in Edo state. In the past, Sapoba in Edo State was called "the mecca of African Forestry". Lapode

(2003) reported that the present vegetation has been significantly altered from the original climatic climax largely due to human influence such as forest harvesting, Agricultural expansion and illegal procurement of timber and non timber produce.

Two species of local, national and international importance in the state forest are *chrysophyllum albidum* and *Terminalia ivorensis*. The economic and cultural importance of these species is enough reason or justification for their regeneration.

Economic importance of *Chrysophyllum albidum*

It has been found very useful in West Africa as a timber tree and the fruit as a source of food. Akinyele and Keshinro (1974) reported that *C. albidum* fruits contain high amount of vitamin C. Ogbe et al. (1992) reported that *C. albidum* fruit has 8% protein 17.% oil, 21% sugar

and 11% starch. The fruit pulp has been used on experimental basis for excellent jams, jellies with good appearance and flavour (Anazonwu, 1981). Stores and stores (1979) reported that *C. albidum* fruits are used to make wine in South Africa and in Zambia, alcoholic beer from the astringent fruits have been brewed. The wood is used in the manufacture of house hold utensil (Kocchar, 1986; F.A.O, 1988) . The powder obtained from the dried roots is used in the treatment of rheumatism. The seeds are used for playing games and as counting aid for junior school children. The powder obtained from the bark is used locally in the treatment of borchitits. Oyenuga (1967) remarked that the vast majority of Nigerian populace are not only improperly fed but under fed. It is important therefore to supplement the existing cultivated fruits like mango, etc. with those from the wild like *C. albidum*, *Spondia mombin* etc.

Cultural Value of *Chrysophyllum albidum*

Some of the cultural values of *C. albidum* have been underscored by the following.

- The seed shell is used as rattles which adorn the ankles of traditional dancers.
- Bows and arrows which are indispensable traditional defence weapon are made from the light weight wood.
- The tree base is used as site for fertility rites in Anambra and Imo state of Nigeria (Okafor, 1979). It is also in pagan idol worship and infertility rites in which young girls; childless wives celebrate with eating, singing and dancing while praying the gods of fertility for children.

Economic importance of *Terminalia iverensis*

It is a well known indigenous tropical hardwood species and very much in great demand both nationally and internationally. It is one of the most important fourteen (14) tropical hardwood species which dominated international timber trade from Africa from 1950 to 1975 (Last et al., 1983).

The purpose of this investigation is to ascertain the level of economic contribution of the forest to the state economy, justification for increased investment on forest conservation, regeneration and sustainable management of the forests. Further more, to provide basis for environmental friendly forest operations an adequate practicable forest policy relevant in the 21st century.

MATERIALS AND METHODS

Study area

The study area is shown in appendices I and 11

The study was conducted in the 18 local government areas of the

state to determine the number of mills using wood as raw materials, forest reserves in hactre, revenue to the state, and staff strength of the work force of the state. The non-timber forest produce from which revenue was derived were identified. Information on the current status of the forest was gathered from the relevant government control agencies. The assesment did not involve mathematical modeling. This the first time this type of preliminary assesment was deliberately undertaken to assess the above parameters.

RESULTS AND DISCUSSION

The outcome of the investigations are presented in tables 1,2,3 and 4 Evidence from the investigations showed that there is a good spread of wood based industries in the state (Table 1) linearly every local government area a wood based industry. There is evidence also that the state government derived some revenue from the forests (Table 2).There some revenue accruable to government from several tariff. The state has a number of skilled staff of all categories (Table 3). These are not enough to man the state forest area from which reasonable revenue accrue to government. The forests also contribute to unemployment reduction. Apart from the information in Table 3, over 10,000 people where noted to be engaged as workers in all the mills using wood as raw material. The workforce is inadequate; the forest areas thus become vulnerable to the activities of illegal timber fellers with a lot of negative impacts. These illegal activities resulted in lost of revenue to government, sustainable forest management is not possible and among others the local communities for which the government is holding and managing the forests intrust are dissatisfied. The inherent danger is that the people in these forested areas may call for resource control like what is happening in Niger Delta in Nigeria where there is much unrest, violence and destruction of lives and properties. Winpenny et al., (1993) observed that forests and trees in Nigeria have been used faster than they have been regenerated. Fameso and Okoye (1996) noted that one of the militating factors against tree planting in rural Nigeria is lack of suitable tree seedling. All of these can be addressed with adequate funding.

From the study there is enough justification for the state to increase investment in forestry subsector-forest regeneration, forest protection. This study showed that government can reduce unemployment, earn revenue from the forests and sustain Wood bases industries. Inclusion of local community representative in forest Management and conservation efforts is recommended. Forest production has fallen in Nigeria from significant exporter of forest products to net importer (ITTO, 2006). Apart from the timber, (Table 4) shows some other activities based on forest produce. These activities and other roles of the forest can only be sustained if government is committed to conservation and sustainable forest management effort.

Table 1. Distribution of saw mills and forest reserves in Edo State Nigeria.

Local Government Area	No. of band mills.	Forest reserved (Ha)
Akoko-Edo	1	-
Egor	51	-
Esan Central	0	3,993
Esan North East	2	2,009
Esan South East	0	27,772.50
Esan West	2	4,950
Esako Central	0	13,784
Etsako East	0	1,295
Etsako West	5	11,921
Igueben	0	2,875
Ikpoba Okha	50	12,316
Oredo	13	3,876,24
Orhionmwon	0	69,064,80
Ovia North East	73	100,109
Ovia South West	14	123,914
Owan East	2	12,422
Owan West	10	10,763
Uhumwode	14	41,692.48
Total	217	1,928,139

Table 2. Revenue from the forests 1991 – 2002

Year	Accrued Revenue (₦)
1991	1,819,233.62
1992	4,982,323.06
1993	9,233,476.10
1994	16,007,371.05
1995	25,439,121.07
1996	11,802,182.00
1997	71,481,186.00
1998	20,992,892.00
1999	20,413,330.30
2000	46,395,110.00
2001	28,801,334.00
2002	22,99,025.00

Table 3. Staff strength 1995 – 2000.

Staff type	Year					
	1995	1996	1997	1998	1999	2000-2006
Professional (with University degrees)	22	19	19	19	19	18
Technical (Non University graduate)	33	30	23	23	18	17
Forest Guards	127	97	58	22	22	99
Ancillary	291	216	176	56	56	56
Total	473	362	276	120	115	190

Conclusion

The findings in this assessment should be implemented

by government and government led control agencies to guarantee environmental protection, forest conservation, regular availability of raw material to wood based indus-

Table 4. Non forest timber products.

Type	Remarks
Craft works	Generated Income
Fuelwood gathering	“
Charcoal Production	“
Bee keeping/honey Production	“
Canoe Carving	“
Broom Making	“
Mat waving Industry	“
Chewing Stick Production	“
Sponge Production	“
Mortal Pestle Production	“
Tooth Picks and Pencils	“
Phyto Medicine	“
Fruit gathering for sales	Mostly by women. (Generates income)
Wild life	Source of animal protein (Generates Income)

*All these enhance the income of the rural communities. If the forest is not sustainably managed all the above and their benefit to man will be lost.

industries, employment to workers, increased revenue to government from various tariff and maintain source of phytomedicine. A consequence of the failure to adopt the result of the findings is likely to culminate in environmental deterioration, deforestation, taxa extinction, loss of revenue to government, etc.

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